Claims

What is claimed is:

1. A multilumen catheter assembly, comprising:

a unitary portion having an outer wall, a distal end, a proximal end, and a plurality of lumens extending longitudinally therethrough; and

a plurality of distal end tubes, each defining a longitudinally extending lumen therethrough, wherein the lumens of the distal end tubes are each in fluid communication with a respective lumen of the unitary portion, the distal end tubes being capable of independent movement with respect to each other.

2. The multilumen catheter assembly of claim 1, wherein the distal end tubes are each generally semi-circular in cross section.

3. The multilumen catheter assembly of claim 1, wherein the outer wall of the unitary portion is generally circular in cross section.

4. The multilumen catheter assembly of claim 1, wherein the outer wall of the unitary portion is generally oval in cross section.

5. The multilumen catheter of claim 4, wherein the lumens of the unitary catheter are generally circular in cross section.

6. A multilumen catheter assembly, comprising:

two catheter tubes, each having a round lumen extending longitudinally therethrough and each having an exterior of generally semi-circular cross sectional shape; and

a hub securing the two catheter tubes in juxtaposed alignment with respect to one another, wherein the tubes in juxtaposed alignment together have a generally oval shape in cross section.

7. A multilumen catheter assembly, comprising:

a unitary portion having an exterior surface of generally oval cross section, a first lumen and a second lumen extending longitudinally therethrough, a distal end, and a proximal end; and

a first distal end tube defining a first longitudinally extending passageway and a second distal end tube defining a second longitudinally extending passageway,

wherein the first and the second distal end tubes extend distally from the distal end of the unitary portion and are capable of independent movement with respect to each other, the first passageway in the first distal end tube being in fluid communication with the first lumen

and the second passageway in the second distal end tube being in fluid communication with the second lumen.

8. The multilumen catheter assembly of claim 7, wherein the lumens and the passageways have a generally circular shape in cross section.

9. The multilumen catheter assembly of claim 7, wherein the first and the second distal end tubes each have an exterior of generally semi-circular shape in cross section over a portion of their longitudinal length and an exterior of generally circular shape in cross section over a remaining portion of their longitudinal length.

10. The multilumen catheter assembly of claim 9, wherein the portion of the first and the second distal end tubes having an exterior of generally semi-circular shape are releasably attached.

11. The multilumen catheter assembly of claim 10, wherein the releasably attached portion of the first and the second distal end tubes are splittable through use of minimal force.

12. The multilumen catheter assembly of claim 11, wherein the minimal force is between one and five pounds of force.

13. The multilumen catheter assembly of claim 7, wherein at least one of the first and the second distal end tubes is greater in length than the unitary catheter, wherein length is measured in a longitudinal direction.

14. The multilumen catheter assembly of claim 7, wherein the first and the second distal end tubes each have an exterior generally circular in cross section.

15. The multilumen catheter assembly of claim 7, wherein the first and the second distal end tubes each have an exterior generally semi-circular in cross section.

16. The multilumen catheter assembly of claim 7, wherein the first and the second distal end tubes are aligned so that the tubes together have an exterior that is generally oval shaped in cross section.

17. The multilumen catheter assembly of claim 16, wherein the first and the second distal end tubes are releasably attached for at least a portion of their longitudinal length.

18. The multilumen catheter assembly of claim 7, wherein the first and the second distal end tubes each have an exterior generally "D"-shaped in cross section, the "D"-shape defining a generally flat exterior portion and a rounded exterior portion.

19. The multilumen catheter assembly of claim 18, wherein the first and the second distal end tubes are adjoined to one another along their respective flat exterior portions for at least a portion of their longitudinal length.

20. The multilumen catheter assembly of claim 19, wherein the adjoined first and second distal end tubes together have an exterior that is generally round in cross section.

21. A multilumen catheter assembly, comprising:

a unitary catheter having a smooth, rounded exterior surface with a generally oval transverse cross section, the unitary catheter having a distal end and a proximal end; and

first and second distal end tubes extending distally from the distal end of the unitary catheter, each of the distal end tubes having a distal portion terminating in a distal tip and a proximal portion terminating in a proximal tip,

wherein at least one of the first and the second distal end tubes is greater in longitudinal length than the unitary catheter,

wherein the first and the second distal end tubes are releasably attached from their respective proximal tips over a length of their respective proximal portions and are separate from their respective distal tips over a length of their respective distal portions,

wherein the first and the second distal end tubes are each generally "D" shaped in transverse cross section over the releasably attached portion and generally circular in transverse cross section over the separate portion.

22. A method of making a multilumen catheter assembly, comprising the steps of:

forming a unitary catheter tube having a distal portion and a distal end portion terminating in a distal end, a proximal portion terminating in a proximal end, and a first lumen and a second lumen, each of the first and the second lumens extending longitudinally through the unitary catheter tube; and

splitting the unitary catheter tube longitudinally along the distal end portion of the unitary catheter tube to form a first distal end tube and a second distal end tube.

23. The method of claim 22, wherein an exterior of the unitary catheter has a generally oval shape in cross section.

24. The method of claim 23, wherein the first and the second lumen have a circular cross section.

25. The method of claim 22, wherein an exterior of the first and the second distal end tubes each have a generally semi-circular shape in cross section.

26. The method of claim 22, further comprising the step of finishing an exterior of the first and the second distal end tubes so that each has a generally semi-circular shape in cross section over a portion a longitudinal length of the first and the second distal end tubes, the first and the second distal end tubes having a generally circular shape in cross section over a remaining portion of the longitudinal length.

27. The method of claim 26, further comprising the step of releasably attaching the first and the second distal end tubes over the portion of the longitudinal length where the first and the second distal end tubes have a generally semi-circular shape in cross section.

28. The method of claim 22, further comprising the step of releasably attaching the first and the second distal end tubes to one another over at least a portion of their longitudinal lengths, whereby the first and the second distal end tubes are splittable by minimal force over the releasably attached portion.

29. The method of claim 28, wherein the first and the second distal end tubes are releasably attached beginning at a point where the first and the second distal end tubes begin to extend from the unitary catheter tube and continuing over a proximal portion of their longitudinal lengths, and are separate over a distal portion of their longitudinal lengths to the distal end.

30. The method of claim 22, wherein, after splitting, a length of at least one of the first and the second distal end tubes is greater than a length of a remaining portion of the unitary catheter tube.

31. The method of claim 22, further comprising the step of grinding and polishing the first and the second distal end tubes to provide a generally smooth exterior surface to each of the first and the second distal end tubes.

32. The method of claim 31, wherein an exterior of each of the first and the second distal end tubes is circular in cross section after the grinding and polishing.

33. The method of claim 22, wherein forming the unitary catheter tube is by a heat molding process.

34. The method of claim 33, wherein the heat molding process is extrusion.

35. A method of making a multilumen catheter assembly, comprising the steps of:

forming a unitary catheter tube to have a distal portion and a distal end portion terminating in a distal end, a proximal portion terminating in a proximal end, and a first lumen and a second lumen, each of the first and the second lumens extending longitudinally through the unitary catheter tube;

splitting the unitary catheter tube longitudinally along the distal end portion to form a first distal end tube and a second distal end tube, thereby creating a point of transition between split and unsplit portions of the unitary catheter tube, wherein a length of the split portion of the unitary catheter tube, defined as the length from the transition point to the distal end, is greater than a length of the unitary catheter tube from the proximal end to the transition point; and

releasably attaching the first and the second distal end tubes to one another along a partial portion of their longitudinal lengths, the first and the second distal end tubes being releasably attached from the transition point to a bonding point located between the transition point and the distal end, the first and the second distal end tubes being separate from the transition point to the distal end, whereby the first and the second distal end tubes are splittable by minimal force from the transition point to the bonding point and independent and free floating from the bonding point to the distal end.